

**PROCESS FOR PRODUCING WATER-SOLUBLE THERMOSETTING POLYMER****Publication number:** GB1218394**Publication date:** 1971-01-06**Inventor:****Applicant:** TOHO KAGAKU KOGYO KABUSHIKI KA (JP)**Classification:****- international:** C08G65/26; C08G69/48; C08G65/00; C08G69/00;  
(IPC1-7): C08G20/38**- European:** C08G65/26F4; C08G69/48**Application number:** GB19680009975 19680229**Priority number(s):** JP19670014208 19670308**Also published as:** US3609126 (A1)  
 DE1645536 (A1)**Report a data error here****Abstract of GB1218394**

1,218,394. Alkenoxylated polyamides. TOHO KAGAKU KOGYO K.K. 29 Feb., 1968 [8 March, 1967], No. 9975/68. Heading C3R. [Also in Division D2] A water-soluble thermosetting polymer is produced by reacting a dicarboxylic acid with a polyalkylenepolyamine, reacting the polyaminepolyamide thus formed with an alkylene oxide, and reacting the hydroxyalkylpolyamide-polyamine thus formed with epichlorhydrin or epibromohydrin in aqueous solution. Suitable dicarboxylic acids are malonic, succinic, fumaric, maleic, glutaric, adipic, pimelic, azelaic, sebacic, phthalic or mixtures thereof. Examples of polyamines are diethylene triamine, triethylene tetramine, tetraethylene pentamine, pentaethylene hexamine, dipropylene triamine or mixtures thereof. Specified alkylene oxides are ethylene, propylene and butylene oxides. After the reaction, the product is usually adjusted to pH of less than 5, using a mineral or organic acid. Uses.-In the manufacture of paper, coagulant, decolorant, cross-linking agent for polymers, anti-hydration agent, shrink-resistant for wool, textile treating agent.

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